

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 25.05.2018

version no: 2

Revision: 12.04.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

**Trade name:** **PROTECTAN SPRAY**

**Article number:** 105193

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture**

Auxiliary product for photographic processing  
Photographic solutions against oxidation and increases stability.

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

TETENAL Europe GmbH  
Schützenwall 31-35  
D-22844 Norderstedt / Germany  
Phone: +49 (0) 40 521 45-0; Fax: +49 (0) 40-52145-296  
www.tetenal.com E-Mail: info@tetenal.com

TETENAL Ltd.,  
2 Meridian West, Meridian Business Park, Leicester LE19 1WX  
Phone: 0116 - 289 3644; E-Mail: uk@tetenal.com; www.tetenaluk.com

**Further information obtainable from:** Department environment and safety. E-Mail: info@tetenal.com

**1.4 Emergency telephone number:**

Poison Information Centre in Germany: +49 (0) 30 - 30686 700 (English 24 hours)

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**



GHS02

**Signal word** Danger

**Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

**Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.  
P260 Do not breathe spray.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
P501 Dispose of contents/container in accordance with local regulations.

**Additional information:**

Buildup of explosive mixtures possible without sufficient ventilation.

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- . **2.3 Other hazards**
- . **Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### . **3.2 Chemical characterisation: Mixtures**

- . **Description:** Mixture of substances listed below and with nonhazardous additions.

#### . **Dangerous components:**

CAS: 106-97-8	butane	50-70%
EINECS: 203-448-7	☞ Flam. Gas 1, H220; Press. Gas C, H280	
Index number: 601-004-00-0		
CAS: 74-98-6	propane	20-30%
EINECS: 200-827-9	☞ Flam. Gas 1, H220; Press. Gas C, H280	
Index number: 601-003-00-5		
CAS: 75-28-5	and isobutane	10-20%
EINECS: 200-857-2	☞ Flam. Gas 1, H220; Press. Gas C, H280	
Index number: 601-004-00-0		

- . **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### . **4.1 Description of first aid measures**

- . **General information:** Immediately remove any clothing/shoes soiled by the product.
- . **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- . **After skin contact:** Immediately rinse with water.
- . **After eye contact:** Rinse opened eye for several (15 min) under running water.
- . **After swallowing:** If symptoms persist consult doctor.

#### . **4.2 Most important symptoms and effects, both acute and delayed**

Headache  
Nausea  
Dizziness

#### . **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

#### . **5.1 Extinguishing media**

- . **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- . **For safety reasons unsuitable extinguishing agents:** Water with full jet

#### . **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

#### . **5.3 Advice for firefighters**

- . **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation

#### . **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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**. 6.3 Methods and material for containment and cleaning up:**

- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents

**. 6.4 Reference to other sections**

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

## SECTION 7: Handling and storage

**. 7.1 Precautions for safe handling**

- Ensure good ventilation/exhaustion at the workplace.
- Open and handle receptacle with care.

**. Information about fire - and explosion protection:**

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- Do not spray onto a naked flame or any incandescent material.
- Fumes can combine with air to form an explosive mixture.

**. 7.2 Conditions for safe storage, including any incompatibilities**

**. Storage:**

**. Requirements to be met by storerooms and receptacles:**

- Store in a cool location.
- Observe official regulations on storing packagings with pressurised containers.

**. Information about storage in one common storage facility:** Store away from foodstuffs.

**. Further information about storage conditions:**

- Do not seal receptacle gas tight.
- Store in cool, dry conditions in well sealed receptacles.
- Protect from heat and direct sunlight.
- Store under lock and key and out of the reach of children.
- Recommended storage temperature: 5-30°C

**. 7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

**. Additional information about design of technical facilities:** No further data; see item 7.

**. 8.1 Control parameters**

**. Ingredients with limit values that require monitoring at the workplace:**

**106-97-8 butane (50-90%)**

- WEL (Great Britain) Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm
- Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm
- Carc (if more than 0.1% of buta-1.3-diene)

- REL (USA) Long-term value: 1900 mg/m<sup>3</sup>, 800 ppm

- TLV (USA) Short-term value: (2370) mg/m<sup>3</sup>, (1000) ppm
- NIC-EX

**74-98-6 propane (10-<25%)**

- PEL (USA) Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm
- REL (USA) Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm
- TLV (USA) refer to Appendix F in TLVs&BEIs book; NIC-EX

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**75-28-5 and isobutane (10-<25%)**

TLV (USA)                      Short-term value: (2370) mg/m<sup>3</sup>, (1000) ppm  
NIC-EX

. **Additional information:** The lists valid during the making were used as basis.**. 8.2 Exposure controls****. Personal protective equipment:****. General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

. **Respiratory protection:** Ensure adequate ventilation**. Protection of hands:**

Impervious gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**. Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

Nitrile rubber, NBR

Neoprene gloves

**. Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**. Eye protection:**

Tightly sealed goggles

. **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

**. 9.1 Information on basic physical and chemical properties****. General Information****. Appearance:**

**Form:** Aerosol  
**Colour:** Colourless  
**Odour:** Characteristic

**. Change in condition**

**Melting point/freezing point:** Undetermined.  
**Initial boiling point and boiling range:** Not applicable, as aerosol.

. **Flash point:** -60 °C. **Ignition temperature:** 365 °C. **Auto-ignition temperature:** Product is not selfigniting.. **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

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<b>. Explosion limits:</b>	
<b>Lower:</b>	1.5 Vol %
<b>Upper:</b>	10.9 Vol %
<b>. Vapour pressure at 20 °C:</b>	4500 hPa
<b>. Density at 20 °C:</b>	0.56 g/cm <sup>3</sup>
<b>. Solubility in / Miscibility with water:</b>	Insoluble.
<b>. Solvent content:</b>	
<b>Organic solvents:</b>	100 %
<b>. 9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- . **10.1 Reactivity** No further relevant information available.
- . **10.2 Chemical stability**
- . **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- . **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- . **10.4 Conditions to avoid** No further relevant information available.
- . **10.5 Incompatible materials:** No further relevant information available.
- . **10.6 Hazardous decomposition products:** Irritant gases/vapours

### SECTION 11: Toxicological information

- . **11.1 Information on toxicological effects**
- . **Acute toxicity** Based on available data, the classification criteria are not met.
- . **Primary irritant effect:**
- . **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- . **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- . **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- . **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- . **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- . **Carcinogenicity** Based on available data, the classification criteria are not met.
- . **Reproductive toxicity** Based on available data, the classification criteria are not met.
- . **STOT-single exposure** Based on available data, the classification criteria are not met.
- . **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- . **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:** No further relevant information available.
- . **12.2 Persistence and degradability** No further relevant information available.
- . **12.3 Bioaccumulative potential** No further relevant information available.
- . **12.4 Mobility in soil** No further relevant information available.
- . **Additional ecological information:**
- . **General notes:** Generally not hazardous for water
- . **12.5 Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.

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. 12.6 Other adverse effects No further relevant information available.

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**SECTION 13: Disposal considerations**

. 13.1 Waste treatment methods

. Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

. European waste catalogue

07 07 04 other organic solvents, washing liquids and mother liquors

15 01 10 packaging containing residues of or contaminated by dangerous substances

15 01 04 metallic packaging

. Uncleaned packaging:

. Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

. 14.1 UN-Number

. ADR, IMDG, IATA UN1950

. 14.2 UN proper shipping name

. ADR 1950 AEROSOLS

. IMDG AEROSOLS

. IATA AEROSOLS, flammable

. 14.3 Transport hazard class(es)

. ADR

. Class 2 5F Gases.

. Label 2.1

. IMDG, IATA

. Class 2.1

. Label 2.1

. 14.4 Packing group

. ADR, IMDG, IATA Void

. 14.5 Environmental hazards:

. Marine pollutant: No

. 14.6 Special precautions for user

Warning: Gases.

. Danger code (Kemler):

-

. EMS Number:

F-D,S-U

. Stowage Code

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

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<b>. Segregation Code</b>	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
<b>. 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>. Transport/Additional information:</b>	
<b>. ADR</b>	
<b>. Limited quantities (LQ)</b>	1L
<b>. Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
<b>. Transport category</b>	2
<b>. Tunnel restriction code</b>	D
<b>. IMDG</b>	
<b>. Limited quantities (LQ)</b>	1L
<b>. Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
<b>. UN "Model Regulation":</b>	UN 1950 AEROSOLS, 2.1

**SECTION 15: Regulatory information**

- . 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- . REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- . 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**. Relevant phrases**

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.

**. Contact:** E: sida@tetenal.com

**. Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- ICAO: International Civil Aviation Organisation
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas C: Gases under pressure – Compressed gas

**. \* Data compared to the previous version altered.**